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**Title:** Effects on health care utilisation of early pulmonary rehabilitation on hospitalisation for an acute exacerbation of chronic respiratory disease

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**Body:** Introduction: Hospitalisation for acute exacerbations of chronic respiratory disease (AECRD) are important events and are associated with future increased health care utilisation. Aim: Establish the effects of a pulmonary rehabilitation (PR) programme starting during hospitalisation for an AECRD. Methods: A 2 centre, single-blinded, randomised, control trial comparing a six week PR, including home based rehabilitation following hospital discharge, starting on hospitalisation with usual care was conducted. Primary outcome was hospitalisation rate at 12 months. The number of hospital days and time to first readmission were also recorded. Results: 389 patients were recruited. There was no difference in hospitalization rate at 12 months (Intervention 59.9% vs Control 57.5%, p=0.434). A reduction in hospital days was seen in the intervention group (Incidence Rate Ratio 0.705, 95% CI 0.512-0.971, p=0.032). Figure one shows the cumulative number of hospital days against subsequent admissions (17.9% difference). There was no difference in time to first readmission.

Conclusions: Early PR did not affect hospitalisation rate however a significant reduction in the number of hospital days was seen in the intervention group. Early pulmonary rehabilitation may lessen the impact of hospital readmission.